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An Inaugural Dissertation On Hæmoptysis

BY

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When we contemplate the delicate structure and nicely balanced arrangement of the Pulmonary organs, it cannot be a matter of surprise that they should so often become the subject of disease.—

These organs, which are situated in the cavity of the Thorax, have their bloodvessels more numerous than those of any other part of the body of the same capacity. These vessels which are subdivided into trunks of the smallest size, and are spread out near the internal surfaces of the Bronchial cavities, are situated in a loose cellular texture, and covered by a delicate membrane only, so that, considering how readily and frequently these vessels are distended with blood, we may readily infer, why an Hæmorrhage from the Lungs is next in frequency to that of the Nose.—

Hæmoptysis as it is defined by Systematical Writers, is a spitting of blood. It is arranged by

Cullen in the class Pyrexiæ and order Homorrhagiæ. Hemoptysis most frequently occurs from the age of sixteen to that of thirty five. The reason assigned by Authors, why Homorrhage occurs at this particular stage of life, is that when the several parts of the system have attained their full growth, there is an equilibrium existing between the systems of the Aorta and Pulmonary artery, or between the vessels of the Lungs, and those of the rest of the system, consequently, whatever has a tendency to destroy this nicety of balance will be the cause of Homorrhage from the Lungs. Cullen says that although the vessels of the Lungs are small in proportion to their office, yet they are commonly compensated by the greater velocity of the blood in them, yet if this velocity be not always adjusted to the established compensation, it is probable that a plethoric state of the whole system, will, ~~will~~ always

be especially felt in the Lungs.—
According to Bichat and other anatomists, we have no facts or experiments, tending to illustrate that the blood circulates with greater velocity, through the Pulmonary organs, than in the other parts of the system. The blood in Hemoptysis may issue either from the Lungs, Trachea, or Fauces. in the last it is merely brought up by ~~hawking~~ hawking, without pain, cough, oppression, or febrile exascerbation; and sometimes we can on examination readily distinguish the source from which it proceeds. It is said that the blood discharged by the fauces, is rarely or never of so florida colour as that issuing immediately from the ~~Lungs~~ Lungs. That which takes place from the Trachea is sometimes of very serious importance, and demands particular attention. It is said in some instances to be the precursor of Phthisis Pulmo-

-nalis. Dr Chapman says that he has seen cases of this kind where Catarrh terminated thus in Phthisis Pulmonalis.

Symptoms

Hemorrhage from the Lungs is characterised by coughing up florid, or frothy blood; preceded usually by heat or pain in the chest, irritation about the Larynx, and a saltish taste in the mouth, pulse frequent, full, and with a particular kind of vibration, even when soft and weak. it frequently is after a day or two. Of all these Symptoms the spitting of blood is the most constant and severe, this is commonly very copious returning by fits, with cough oppression, anxiety intense redness or extreme paleness of the face and coldness of the extremities. By attend to these circumstances it can readily be distinguished from Hematemesis, as in the latter the blood is thrown out in considerable quantities

is of a darker colour, more grumous, and mixed with the other contents of the stomach. The blood which proceeds from the lungs is for the most part arterial, that in Hæmatemesis venous. The milder cases of Hæmoptysis are now very generally considered as depending on some functional derangement of the bronchial membrane, which causes it to exhale blood in place of its ordinary mucous secretion.

Causes.

Hæmoptysis is frequently produced by a predisposition from conformation, indicated by prominent shoulders, and narrow chest, delicate make, and sanguine temperament, and is excited by loud and long speaking or singing, violent exertions, such as jumping, wrestling, catarrh, cough &c. It likewise happens to persons, who have been formerly subject to repeated Hæmorrhages from the nose. It is also

said that Hemoptysis is excited by a sudden diminution of the weight of the atmosphere on ascending the summits of new lofty mountains where the state of the atmosphere is very much rarefied, combined with the exertions made in ascending, is frequently an exciting cause of Hemorrhage from the Lungs. It is also brought on by sudden vicissitudes in the weather, and it remarks its appearance in the Spring and opening of Summer. It occurs in a great majority cases, at night when there is least to prevent it, including increasing in a certain degree according to the state of sleep or not, Dr Clubman says is uncertain.

There are several varieties of this disease which take place in different ways 1st Of non accidental rupture of blood

repel, as by a fall or wound. 2nd From excessive inflammation as in Pleurisy, Pneumonia &c. 3rd From the suppression of some accustomed evacuation as in menses, Hemorrhoids &c. 4th From mucous tinal inflammations of the respiratory. 5th From an abscess in the lungs. 6th From tubercles which is almost always a fatal termination in Phthisis Pulmonalis.

Remedies

The first object in the cure of all diseases is to remove the causes of pain as they still continue to operate.—

Tonics Gymnastics in Water and other mixtures, such as Acetic and Papaver, and I shall speak first of the Acetic form. When it is connected with a high arterial action it is generally accompanied with a sense of weight and oppression in the chest, a short and dry cough difficulty of respiration, with a full hard

pulse and chills succeeded by heat, cold extremities, lassitude &c. The chief indication here, is the reduction of inflammatory action and the most prompt and effectual means of fulfilling this indication is venesection, which should be carried so far as to make a decided impression on the pulse. In Hernia is opposed to venesection. "Hernia says Dunglison the opening of one vessel, stops the flow from another vessel already opened." But long experience has established the utility of venesection in this stage of strangulation. After Cathartical action is sufficiently secured in which the obstruction of bowels gives in direct the use of common salt, in solution, in the dose of a tea cup full every, fifteen or twenty minutes till the hypothecal stomach and the mouth and involuntary expulsion of the bowels

in this way. The modus operandi of this medicine is not very intelligible, but the generally received opinion is that it operates as an astringent. The patient should be placed in a well ventilated apartment, his shoulders elevated, and absolute rest enjoined on him, all company should be excluded, and he should not be allowed to talk. His diet should be mild, abstinent, consisting of light soups and acidulated drinks such as Lemonade &c, his bowels should be kept in a solutive state, though no great advantage is gained from active purging. Cocktailing with the same end in view, the use of cold applications to the chest and particularly to the axillæ, as these are no part of the body more susceptible of the impression of these applications.
In cases of great emergency it was highly

recommended by Dr Bond to envelope the whole body in a sheet wet with cold water or vinegar; the effusion of cold water on the body, or its immersion in the water bath has been also resorted to in desperate cases, but these applications should not be used where there is a predisposition to pulmonary complaints. Cold ablutions to the scrotum have also been strongly recommended.

Should all the measures mentioned prove unsuccessful, the septum nasi, which presents itself in cases of severe and long-continued disease, and was thought to pandemic and attended by Uterine Hemorrhage. It was considered by Dewees as a specific in Hemorrhage from the Uterus, and was applied to a man deranged on a long time from an abundance of the internal spasms. Mr C. Pinter

we are indebted for its introduction into this country. One precaution however is necessary in the administration of this medicine, when there is a plethoric state of the system, that it should always be preceded by previous venesection, otherwise it would more mischievous rather than good, from its being given combined with a great quantity of food given every half hour, and in large doses. Dr Chapman thinks that it would be more efficacious; he says that he has known as much as fifty to the latter without any, other bad effects than the first purging and some quaking.

Mr Z. Lachlan, of this city, claims the merit of having introduced it to our notice, and always as a substitute for ipecacuanha, and has given it in upwards of experience & science in active

Stimpson's [illegible] resorts to it as a suitable for venesection [illegible] of [illegible] medicinal nostrum [illegible], but will [illegible] in [illegible] in the [illegible] [illegible] [illegible] contemplated in the whole [illegible] Medica which [illegible] the use of venesection in Hemorrhagic [illegible] with high [illegible] action of the [illegible] Digitalis was considered by Hoffman as opposing powers of approximating the [illegible] in Hemorrhage. It has been recommended [illegible] [illegible] [illegible] of blood when the pulse [illegible] soft, the skin cool, and many the indications of Inflammatory Diathesis have disappeared, but under these circumstances I would be unwilling to resort to direct depletion; even here it has been doubted, whether it would not be the preparation of a [illegible] [illegible] [illegible] [illegible]

If Digitalis be ever useful in this disease, it is when this affection is connected with bronchitis and the type of Pitcairn's pneumonia occurs, with a small quick, irritated pulse, short and hurried respiration and a rapid diminution of strength.

Alum was also in use as an astringent in pulmonary consumption after the bleeding has stopped to prevent its recurrence. Emetics were strenuously recommended in hoarseness, dyspnœa, generally, as well by some practitioners as hazardous, and the necessary exhaustion consequent on the vomiting, constipation, and strain, as be avoided under extreme circumstances, and in some modern remedies that have fallen into disuse. They are said to be advantageously prescribed in Laryngitis complicated with a low state of the system, or in immediately the

slight and mild with menses, given under
these circumstances they determine to the surface,
quiet the cough, open the bowels, are diuretic,
promote expectoration, and equalize circulation.
Doses are in very common use nauseating
doses, which I decidedly object to. The
improvement. Tartar emetic, wine of
ipecac & tinctura scillæ in doses
of 30 gtts every hour in two.
Refrigerants, the neutral salts, mucilaginous
diaphoretics, & the nitrous products of ammonia
are justly merits the approbation of
the Lancet. Such an emporium, as
under mixtures are usually enhance
by combining, [illegible] the [illegible] incredients.
Dr Beccari says the various other remedies
[illegible] unnecessary in the management
he had recourse to the venesection & blister

and appears that it had been followed by continued success, after a small bleeding, which he says was not always necessary, he mixed the quantity of tonic in 3 to 4 drachms in an ounce of gum water, two or three table spoonfuls of which were taken morning.

Some of the best Jamaica ginger came under my observation last summer, and will be an article in more of the best class. It is often taken at an early hour in the morning in preference to other stimulants or cordials.

The subject of this sketch was a young man of Baltimore habit and predisposed to the disease from organization, having received a severe blow upon the chest by a ball & violent Hemorrhage almost immediately ensued from his Lungs from which at the time the time he accident occurred

bled him copiously and directed the use
of common salt, and cold applications to the
applied. In the first instance in a short
time the hemorrhage ceased, but there still
remained a little excitement in the system
and a tendency of the hemorrhage to return;
the nitre combined with a small portion of
Tartar emetic, was prescribed to prevent its
recurrence. However in a very short time
a most alarming discharge of blood burst
forth again. His mother who was present
being very much alarmed, ran to a table
on which there was a vial containing
an ounce or more of the Nitrate of Potash,
dissolved it in a glass of water and gave
him the whole at once, being unconscious
of its deleterious effects. [illegible]
his stomach became very irritable; vomiting X
was immediately excited, and the hemorrhage

completely annoying.—

4. General Acids. These are more astringent than the Neutral salts, and may be used in the treatment of the disease, however they should not be used in preference to remedies of more decided efficacy, which have been spoken of above. Nitro Muriatic Acid, in the bath and the dose is in 20 drops twenty times in the day, has been found answering very well.

Local Applications. Cold has been already mentioned, the Vesicating applications are of decided utility in this disease, and have frequently cured it after years of chronic suffering, much has been said in bygone days for their application, but the majority of Physicians of the present opinion that they ought to be put immediately on the chest as the efficacy of such applications is in

inflammation to be given immediately, to the part affected; and where revulsion is wished to be effected in the consideration of mental action to be considered, it may similarly be applied to the extremities.

Passive Hemorrhage or Hemorrhage of feeble action. The first object here to be aimed at, by all debilitating measures, is to establish such as respect the power of increasing tone to the system and the remedies which we should employ to fulfil this indication are Tonics, —

The Peruvian Bark sustains the highest reputation. Dr Rush spoke with a degree of enthusiasm of it. It is commonly prescribed alone, but is best combined with Astringents, as the Sulphates and Nitrate of Iron. Other vegetable astringents have been used, such as Kino, Catechu, &c — but they have nearly fallen into disuse

in Hæmoptysis, it is, as, useful in other Hæmorrhages.

Mere debility it is said is derived from the mineral acids, the Sulphuric is best, but where this disease is connected with a scrofulous Diathesis, the Nitric acid is to be preferred. These remedies may be aided by exercise, an invigorating Diet and generous Drink. Moderate exercise on horseback is the mode in which it is generally preferred, it should be taken in fair weather, and the patient not to fatigue himself. His diet should be light and nutritious. Porter is the best drink; it imparts tone and astringency to the bleeding vessels.

When Hæmoptysis is connected with constitutional peculiarities, it leaves behind it a very great tendency to recurrence. Under

these circumstances, the patient should be put under a strict prophylactic plan, he should avoid every cause which has a tendency to increase the impetus of the circulation, such as undue exercise and improper diet, he should observe the greatest caution in exposing himself to cold, as nothing tends more to reproduce it than Catarrh. When a predisposition to phthisis exists, particular attention to the state of the pulse and chest should be observed; should excitement in the circulation, and pain in the chest supervene, small bleedings, rest low diet, nitre, and the whole of the Antiphlogistic plan should be immediately resorted to. When the local affections are urgent much good has been derived from perpetual Blisters to the chest. When the disease is very obstinate a Mercurial course has been recommended, It is said however

that cases will sometimes occur which will resist all our medicines, here as a dernier resort advise the patient to remove to a warmer climate and by a sea Voyage —